

Self-commentary

The Evolution of FCC Lobbying Coalitions

Co-filing behavior in FCC Docket 01-92 on Inter-Carrier Compensation

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The graph is derived from meta-data associated with documents that are filed electronically whenever an organization interacts with the FCC, in accordance with the Administrative Procedures Act. Whenever a letter, comment or other document is filed, the filer provides information on the parties involved, number of pages, relevant proceedings, date, etc.

When this project started, the meta-data was not readily available. While it was public in the form of search results generated by the FCC's Electronic Comment Filing System (ECFS), screen scraping a decade of data ten records at a time proved to be impractical. Fortunately Bill Cline, manager of the FCC Reference Information Center, agreed to run *ad hoc* batch jobs against the database to extract the information, which was provided as year-by-year spreadsheets. Thanks to recent web upgrade, such information can now be user-downloaded from <http://fjallfoss.fcc.gov/ecfs2/>.

Once the raw data had been obtained, it had to be cleaned. The metadata is typed into ECFS by paralegals when documents are filed – often in a rush just before a filing deadline – and input errors are common. They include misspellings and multiple variants of organization names, information entered into the wrong fields, and mismatches between information in the filing and the metadata. There are also ambiguities that are not strictly speaking errors, such as inconsistencies in specifying a subsidiary vs. a holding company, “doing business as” designations, fields left blank in some filings but not others, and abbreviating the list of filing entities. Before generating graphs, a clean-up macro (programmed in Visual Basic for Applications) was run against a synonym list currently contains more than 4,000 entries.

This project focused on the connection implied by organizations filing together. While multiple filers names are sometimes given in metadata, at other times merely one company name plus “et al.” is given. For such records one has to refer to the underlying filing to “unpack” the list of all the other filers. This work cannot be easily automated, and was done by hand in this case; since it is so time-consuming, it was one of the reasons for limiting attention to a single proceeding that spanned only seven years.

Once the data is cleaned up, an edge list is created in Excel by running another VBA macro. A graph is created from this list with NodeXL, a social network analysis and visualization add-in for Excel 2007. NodeXL's Fruchterman-Reingold algorithm is used to prepare a preliminary layout; nodes are then moved by hand into visually intelligible

positions, respecting the clusters suggested by NodeXL's implementation of the Wakita-Tsurumi algorithm. Nodes are colored on the basis of eigenvector centrality. The degree of investment that organizations make in lobbying is measured by the total number of filings it made in this proceeding over the period of study, and reflected in the size of the node. This information is obtained by running another VBA macro against the underlying ECFS metadata, and then matching that to the vertices in the graph.

Some ambiguities in the data remain to be resolved. Assume that one chooses to map holding companies rather than subsidiaries (rather than vice versa), and has succeeded in substituting subsidiaries named in filings by their parents; on-going mergers and acquisitions changes this mapping over the period being analyzed. Acquisitions lead to companies absorbing not only competitors (that may have been in disjunct clusters early in period of study), but also changing their business interests. In this data set, for example, the "old" AT&T was a long-distance carrier at odds with regional telephone companies like SBC; after the merger in 2005, the "new" AT&T came to have the interests of SBC.